

NEW MEMBRACIDÆ COLLECTED BY THE CORNELL SOUTH AMERICAN EXPEDITION

BY W. D. FUNKHOUSER

Through the courtesy of Dr. J. Chester Bradley, of Cornell University, the writer has been permitted to examine a considerable collection of Membracidæ, most of which were taken in South America by the Cornell Expedition of 1920.

In this collection were found seven new species which may be described as follows:

1. *Membracis nigrolutea* new species. (Pl. XVII, Fig. 1.)

Near *M. rosea* Fairmaire but larger and with the markings entirely yellowish white.

Large, black, pronotum angular anteriorly, a distinct carina from anterior angle of foliaceous pronotum to arcuate band above shoulders; sordid yellowish-white band beginning above head, extending arcuately over humeral angles, then straight to dorsal margin; large irregular yellowish-white spot at base of posterior process; tegmina entirely black; undersurface and legs black.

Head longer than wide, black, shining, foliaceous, very finely punctate, not pubescent; base feebly sinuate; eyes large, black; ocelli large, prominent, translucent, farther from each other than from the eyes and situated about on a line drawn through centers of eyes; clypeus nearly as broad as long, extending for nearly half its length below inferior margins of genæ and continuing the general marginal line of the genæ, slightly concave in center, faintly bicarinate in middle, tip rounded and sparsely pilose.

Pronotum strongly foliaceous, finely punctate, not pubescent, black with sordid yellowish-white markings; humeral angles obtuse, blunt, not prominent; metopidium extended in a broad flange over head; dorsal margin bluntly angular above; a strong carina on each side from angle of pronotum to lateral fascia; a broad, regular, yellowish-white fascia on each side arising at base of head, arcuate over humeral angles and then straight to dorsal margin; a large irregular yellowish-white spot covering base of posterior process; posterior process short, heavy, foliaceous, blunt, extending beyond internal angles but not reaching tips of tegmina.

Tegmina entirely black, opaque; veins indistinct; apical limbus broad, wrinkled; five apical and two discoidal areas.

Sides of thorax, undersurface, abdomen and legs entirely black; first two pairs of legs broadly foliaceous.

Length from front of head to tips of tegmina 8.2 mm.; from anterior tip of pronotum to tips of tegmina 10 mm.; width between humeral angles 3 mm.
Type: female. Male similar but smaller.

Described from ten females and four males all collected at Diamantina, Minas Geraes, Brazil, November 18, 1919. Type, allotype and ten paratypes in Cornell Collection; two paratypes in author's collection.

2. *Aconophora projecta* new species. (Pl. XVII, Fig. 2.)

Small, yellow-brown, punctate, pubescent; pronotal process projecting forward and slightly upward; posterior process extending slightly beyond internal angles of tegmina; veins of tegmina strongly pilose; undersurface dark brown; legs yellow-brown.

Head black in center, yellow-brown at margins, twice as wide as long, finely punctate, not pubescent; base feebly sinuate; eyes yellow; ocelli very small, inconspicuous, yellow, about equidistant from each other and from the eyes and situated on a line drawn through centers of eyes; inferior margins of genæ strongly sinuate; clypeus longer than wide, deflexed, base black, tip brown, extending for half its length below inferior margins of genæ.

Pronotum yellow-brown, finely punctate, sparsely pubescent; metopidium twice as broad as high with an irregular smooth brown patch above each eye; humeral angles prominent, blunt; median carina pereurrent; pronotal horn about as long as the distance from the base of the horn to the humeral angle, flattened laterally, lightly carinate above and below, projecting strongly forward and slightly upward; posterior process heavy, tectiform, sharp, extending beyond the internal angles of the tegmina and slightly beyond apex of abdomen but not nearly to the apices of tegmina.

Tegmina hyaline; veins brown and distinctly pilose; base narrowly opaque and punctate; apical limbus broad and wrinkled.

Sides of thorax and abdomen very dark brown; legs and feet uniformly yellow-brown.

Length from front of head to tips of tegmina 5 mm.; length from tip of pronotal horn to tips of tegmina 7 mm.; width between tips of humeral angles 2.4 mm.

Type: female. Male similar.

Described from eleven females and two males, all collected at Cochabamba, Bolivia, April 29–May 4, 1920, by Mr. R. G. Harris. Type, allotype and eight paratypes in Cornell Collection; three paratypes in author's collection.

3. *Ceresa cuprea* new species. (Pl. XVII, Fig. 3.)

Large, shining, bronze-brown, punctate, not pubescent; short suprahumeral horns pointing outward, downward and backward; posterior process slender, not reaching apex of internal apical cell of tegmina; tegmina entirely bronze-hyaline; undersurface and legs bronze-brown.

Head twice as broad as long, shining brown, not punctate, not pubescent, faintly longitudinally striate; base strongly arcuate in center; eyes large, prominent, yellow with brown striæ; ocelli small, bronze, inconspicuous, nearer to each other than to the eyes and situated about on a line drawn through centers of eyes; clypeus spindle-shaped, apex faintly trilobed, extending for half its length below inferior margins of genæ.

Pronotum shining bronze-brown, coarsely punctate, not pubescent; metopidium very convex, broader than high, a large irregular smooth yellowish area above each eye; humeral angles small, blunt, inconspicuous; median carina percurrent; suprahumeral horns short, not quite as long as half the distance between their bases, sharp, extending outward, distinctly downward and slightly backward, base conical, tip sharp and black; semicircular impression faint; dorsum well arched in center; posterior process suddenly slender, sharp, dark brown, tip acuminate and reaching to a point about one-third the distance between the internal angle and tips of tegmina.

Tegmina uniformly bronze-hyaline; veins distinct; base narrowly opaque and punctate; apical limbus broad; five apical and two discoidal cells.

Sides of thorax, undersurface, abdomen and legs dark cupreus.

Length from front of head to tips of tegmina 8.2 mm.; width between tips of suprahumeral horns 5.5 mm.

Type: male.

Described from a single specimen taken at Bauru, S. Paulo, Brazil, December 4, 1919. Collector: Harris. Type in Cornell Collection.

4. *Ceresa projecta* new species. (Pl. XVII, Fig. 4.)

Greenish with brown punctures; suprahumeral horns projecting strongly forward, outward and upward; posterior process long, slender, deurved, reaching almost to tips of tegmina; two lateral white fascia on suprahumeral; eyes brown; undersurface and legs luteus; tegmina hyaline; pronotum not strongly elevated.

Head nearly twice as broad as long, yellow, roughly sculptured with longitudinal striæ, coarsely punctate, not pubescent; base arcuate; eyes large, brown; ocelli large, red, conspicuous, slightly elevated, about equidistant from each other and from the eyes and situated slightly above a line drawn through centers of eyes; clypeus blunt, extending only slightly below the sinuate margins of the genæ and almost continuing the line made by these margins, tip rounded and strongly pilose, a faint brown line on each side.

Pronotum greenish, coarsely punctate with brown, not highly arched; metopidium broader than high, a smooth arcuate spot above each eye; humeral angles small, inconspicuous, extending laterad about as far as the eyes; median carina strongly percurrent; suprahumeral horns broad, flattened dorso-ventrally, about as long as the distance between their bases, projecting strongly forward, upward and outward, tips blunt, almost truncate, a narrow white fascia on each side of external surface extending from

tip to base; semicircular impression faint; posterior process long, slender, decurved, tectiform, impinging on tegmina and extending to middle of apical cell of tegmina.

Tegmina hyaline, somewhat wrinkled; base narrowly opaque and punctate; apical limbus narrow; veins prominent and brown.

Sides and undersurface of thorax sordid luteus; abdomen white; legs luteus, claws darker.

Length from front of head to tips of tegmina 7 mm.; width between tips of suprahumeral horns 4.2 mm.

Type: female.

Locality: Cosquin, Sierra de Cordoba, Argentina, March, 1920.

Described from a single specimen now in the Cornell Collection.

5. *Stictolobus maculatus* new species. (Pl. XVII, Fig. 5.)

Luteus with ferruginous spots on pronotum and dark brown markings on tegmina, coarsely punctate, sparsely pilose; shoulders rounded above humeral angles; posterior process slender, acuminate, reaching well beyond internal angles of tegmina but not extending to apices of tegmina; tegmina hyaline with brown markings; sides of thorax and abdomen yellow with black markings; legs yellow with ferruginous markings.

Head subtriangular, wider than long, yellow with ferruginous markings, smooth, shining, not punctate, not pubescent, faintly longitudinally striate; base nearly straight; eyes very large, conspicuous, yellow mottled with brown, extending as far laterad as the humeral angles; ocelli very large, conspicuous, amber-colored, somewhat elevated, nearer to each other than to the eyes and situated on a line drawn through centers of eyes; clypeus twice as long as wide, extending for more than half its length below inferior margins of genæ, tip rounded and pilose.

Pronotum luteus mottled with ferruginous, coarsely punctate, sparingly pilose with long scattered black hairs; metopidium sloping, about as broad as high, an irregular brown line above each eye; humeral angles blunt, median carina strongly percurrent; sides with semicircular impression; posterior process long, acuminate, a large brown spot at base, two smaller ones between base and tip, tip black and extending to a point about half way between internal angles and tips of tegmina and reaching slightly beyond apex of abdomen.

Tegmina hyaline with a large dark brown spot at base and a dark brown transverse fascia at middle; base narrowly coriaceous and punctate; veins very thick, prominent and brown; apical limbus wide and wrinkled.

Sides of thorax luteus with faint ferruginous markings; abdomen luteus strongly marked with black; legs ferruginous-yellow, hind trochanters marked with dark brown; tarsi luteus; ovipositor dark brown.

Length from front of head to tips of tegmina 6 mm.; width between tips of humeral angles 2.5 mm.

Type: female. Male similar.

Described from six females and two males, all collected at Passo Fundo, Rio Grande do Sul, Brazil, January 8, 1920. Type, allotype and four paratypes in Cornell Collection; two paratypes in author's collection.

6. *Aphetea maculata* new species. (Pl. XVII, Fig. 6.)

Near *A. inconspicua* Fowler but strongly marked with dark brown on pronotum and tegmina and with dorsal line more distinctly sinuate.

Green and dark brown, finely punctate, not pubescent, dorsum sinuate, tegmina partly covered by pronotum, undersurface and legs dark brown, legs simple.

Head twice as broad as long, green with strong black punctures, roughly sculptured, not pubescent; base sinuate; eyes brown; ocelli small, brown, inconspicuous, farther from each other than from the eyes and situated about on a line drawn through centers of eyes; clypeus triangular, continuing line of inferior margins of genæ, tip rounded, deflexed and pilose.

Pronotum tectiform, not highly elevated, rounded, covering about half of the tegmina, anterior half green, posterior half dark brown with a small green spot on median line before the apex; metopidium twice as broad as high, smooth brown transverse line over each eye; median carina pereurrent; humeral angles large, prominent, blunt, extending laterad farther than the eyes; posterior process not distinctly set off from the rest of the pronotum, extending beyond middle of terminal cell of tegmina.

Tegmina half concealed by pronotum; basal two-thirds brown, coriaceous, opaque and punctate with veins indistinct; apical third hyaline with veins distinct; terminal cell triangular and petiolate.

Sides of thorax, undersurface of body and abdomen dark brown; legs brown margined with green, simple.

Length from front of head to tips of tegmina 3 mm.; width between tips of humeral angles 1.8 mm.

Type: female.

Locality: Upper R. Paohitea, Peru.

Described from a single specimen collected on July 21, 1920, by the Cornell Expedition. Type in Cornell Collection.

7. *Scytodepsa tricarinata* new species. (Pl. XVII, Fig. 7.)

Small, ferruginous, punctate, pubescent; pronotum with three prominent ridges; no suprahumeral, scutellum entirely exposed; no posterior process; tegmina coriaceous for basal two-thirds, transparent in apical third; head not produced nor lobate; legs simple.

Head about as broad as long, dark brown, finely punctate, densely pubescent with short white hairs, roughly sculptured; base regularly arcuate; eyes small, not conspicuous; ocelli small, brown, farther from each other than from the eyes and situated on a line drawn through centers of eyes; clypeus broader than long, feebly trilobate, continuing the line of the lateral margins of the genæ.

Pronotum ferruginous marked with brown, finely punctate, densely pubescent, elevated above to form three prominent carinæ; metopodium higher than broad, sloping above the head, a large irregular smooth area on each side above the head; median carina percurrent; humeral angles large, prominent, extending laterad much farther than the eyes; posterior process absent, the pronotum nearly truncate at posterior margin; scutellum entirely exposed, triangular, swollen, slightly longer than its width at base.

Tegmina entirely exposed, short, rounded; basal two-thirds coriaceous, opaque, punctate, pubescent, reddish-brown, veins indistinct; apical third hyaline with veins prominent; no apical limb; five apical areas; clavus with two indistinct veins.

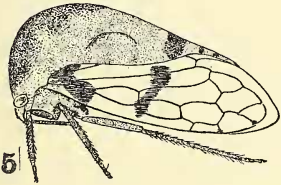
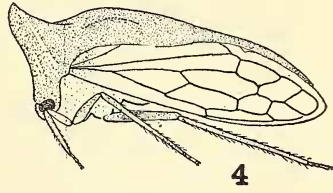
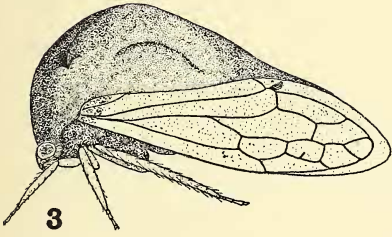
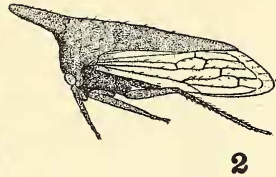
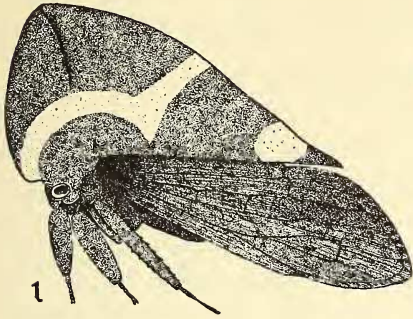
Sides of thorax, undersurface of body and abdomen dark brown; legs ferruginous brown; front tibiæ very slightly flattened.

Length from front of head to tips of tegmina 4.5 mm.; width between tips of humeral angles 1.7 mm.

Type: female.

Locality: Upper R. Paohitea, Peru.

Described from a single specimen collected by the Cornell Expedition on July 21, 1920. Type in the Cornell Collection.



MEMBRACIDAE